

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method of correcting an image with perspective distortion, comprising the steps of:

receiving image data including a distorted object image, wherein the distorted object image is perspective from a projection plane;

setting ~~at least a~~ distortion ~~parameter~~ parameters pertaining to the image data according to an operational instruction, wherein the distortion parameters comprise a distortion central line perpendicular to the projection plane and passing through a coverage point of any set of parallel lines that are not parallel to the projection plane;

calculating a plurality of coordinates of corners of the distorted object image according to the distortion ~~parameter~~ parameters;

determining a transformation matrix according to the calculated coordinates of the corners of the distorted object image; and

transforming the distorted object image to a corrected object image according to the transformation matrix.

2. (Cancelled)

3. (Original) The method of claim 1, wherein the distortion parameter includes a distortion ratio of a distorted side of the distorted object image.

4. (Cancelled)

5. (Original) The method of claim 1, wherein the coordinates of the corners of the corrected object image are calculated according to the location of the distortion central line of the distorted object image.

6. (Original) The method of claim 1, wherein the distortion parameter includes a distorted side of the distorted object image, a distortion ratio of the distorted side of the distorted object image and a location of a distortion central line of the distorted object image.

7. (Cancelled)

8. (Currently Amended) A method of determining coordinates of corners of a distorted object image on an image with perspective distortion, comprising the steps of:

determining a distorted side of the distorted object image, wherein the distorted object image is perspective from a projection plane;

determining a location of a distortion central line of the distorted object image with respect to the distorted side and a distortion ratio of the distorted object image with respect to the distorted side, wherein the distortion central line is perpendicular to the projection plane and passes

through a coverage point of any set of parallel lines that are not parallel to the projection plane; and

calculating the coordinates of the corners of the distorted object image according to the distorted side, the location of the distortion central line and the distortion ratio.